

Full Length Research Paper

Pre-service music teachers' piano performance self-efficacy belief inversely related to musical performance anxiety levels

Hatice Onuray Eğilmez

Music Education Department, Faculty of Education, Uludağ University, Bursa Turkey.

Received 12 August, 2015; Accepted 16 September, 2015

Many factors affect piano performance, including students' self-confidence and self-efficacy about playing an instrument. This study assessed piano performance self-efficacy beliefs in pre-service music teachers studying at the music education department of education faculty of Uludag University to a certain relationships between the strength of their self-efficacy and music performance anxiety. For this purpose, the piano performance self-efficacy scale and 'Kenny's musical performance anxiety inventory' were used. The data obtained via the scales completed by 129 students were analysed using SPSS 16.0. Independent groups t-tests were used to test the significance of the difference between genders on the dependent variables. In the multiple comparisons, Anova was used for parametric distributions and the Mann Whitney-U test was used for non-parametric distributions. To test if the conflict resolution method scores differed according to the variables, the independent groups t-test was used. Male pre-service music teachers' piano performance self-efficacy (general scale score mean) was significantly higher than female students' general scale score mean; female students' music performance anxiety levels were higher than those of the male students; both the self-efficacy beliefs and the music performance anxiety levels of 3rd year students have higher means than that of other grades; the general high school graduate pre-service music teachers had higher piano performance self-efficacy beliefs and musical performance anxiety levels compared with the fine arts high school graduate pre-service music teachers. There was a significantly negative relationship between the musical performance anxiety scale and the student teachers' piano performance self-efficacy beliefs. Finally, various suggestions were made to increase pre-service music teachers' piano performance self-efficacy beliefs and decrease their musical performance anxiety levels.

Key words: Piano performance self efficacy, musical performance anxiety, music education, piano education, pre-service music teacher.

INTRODUCTION

In Turkey, music teachers are trained in the 4-year undergraduate programs of the fine arts education

departments of the education faculties of various 25 Turkish universities. 'Piano education and teaching' forms

E-mail: haticeegilmez@gmail.com.

Authors agree that this article remain permanently open access under the terms of the [Creative Commons Attribution License 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

the basis of music education programs and covers technical exercises and etudes sample works from Turkish and world composers, educational music samples, piano literature and learning-teaching techniques in school music education (YÖK, 1998).

According to Gün and Yıldız (2014), an effective piano performance is based on a complex structure where musical and technical difficulties are addressed holistically. In addition to the musical and technical challenges of piano performance student's self-confidence and self-efficacy beliefs about playing a musical instrument are thought to influence both technical and aesthetic mastery of their instrument (Gün et al., 2014). This belief was defined by Bandura (1986; 391) as "people's judgments about their capacity to perform and organize actions necessary to carry out a performance". In other words, self-efficacy belief is a person's judgment, belief about how much he/she can be successful in overcoming difficulties which he/she is likely to face in the future (Senemoğlu, 1998), that is, an individual's personal belief that he/she can achieve a certain task (Kotaman, 2008). This belief has an important place in a person's life and affects four basic psychological processes, namely cognitive, motivational, emotional and choice-making processes (Bandura, 1995). Self-efficacy is regarded by many educational psychologists as an 'antecedent to academic success because it motivates behaviour (primarily perseverance) that leads to success (Jinks et al., 2003). High perceived self-efficacy leads individuals to create higher targets for themselves, thus increasing motivation to achieve a prescribed outcome (Locke et al., 1990). Moreover, it may affect the degree to which individuals experience stress or depression in response to a learning challenge via their self-perceived capacity to cope with the demands of the task (Bandura, 1995).

Besides its affective aspect, piano performance has physical, cognitive, affective, and aesthetic dimensions. A large body of work has confirmed the ubiquity of music performance anxiety in a range of musicians, including amateur and professional instrumentalists and singers, both solo and ensemble performers and child and adolescent musicians (Kenny, 2011; Kenny and Osborne, 2006). The level of music performance anxiety varies according to the degree of evaluative threat (as in auditions and solo performances) and the nature of the audience (Chan 2011). Students who perceive their task mastery (encompassing self-efficacy) as adequate to the challenge tend to experience a more successful performance. Conversely, when self-efficacy belief levels are lower, they may experience performance impairment and perform at levels below their current capacity (Gün et al., 2014). According to Papageorgi, performance quality is affected not only by the experience and task mastery but it is also affected by psychological factors such as self-perception, self-efficacy belief and performance anxiety (Cited by Tokinan, 2014). McPherson and

McCormick (2006) emphasize the importance of self-efficacy as a determinant of success in music performance exams.

In this study, the relationship between self-efficacy and music performance anxiety in pre-service music teachers was explored. We note that Kenny, Driscoll and Ackermann (2012) observed a negative correlation between core self-evaluation, a test for self-efficacy, and several measures of anxiety, including music performance anxiety as assessed by the Kenny Music Performance Anxiety Inventory (Kenny, 2009, 2011) in elite professional orchestral musicians. We therefore hypothesized that self-efficacy and music performance anxiety would show a negative correlation in pre-service music teachers; that is, the higher the self-efficacy, the lower the music performance anxiety.

It is also interested to assess whether other factors, such as gender, type of graduated high school, and class level of the pre-service music teachers affected this relationship between self-efficacy and music performance anxiety.

METHODOLOGY

The population of the study comprised the 180 students studying at the Music Education Department of the Education Faculty, Uludag University, Turkey in the 2014-2015 academic year. All students were invited to complete a questionnaire. 129 pre-service music teachers, which represented 71.7% of the population, returned a valid questionnaire. Relevant demographic information about the sample is given in Table 1.

Measures

The data collection tool composed of three parts;

(i) Personal Information Form included questions about gender, type of graduated high school and class level of the sample group;

(ii) *Piano Performance Self-Efficacy Scale (PPSES)*: Piano performance self-efficacy scale developed by Gün and Yıldız (2014) includes 25 item divided in to 3 sub-dimensions: technical level perception contains 8 items that describe how sufficient a student perceives his/her own piano technique, stage anxiety perception contains 7 items that describe what a student feels about his/her piano performance when playing in front of the audience, performance level perception which contains 10 items describe student's opinions about his/her own piano performance. The scale is 5-point Likert type scaling system in the form of "strongly agree", "agree", "neutral", "disagree" and "strongly disagree" was used. To measure the reliability of the scale, Cronbach's Alpha coefficient was calculated. The total reliability coefficient of the scale was $\alpha = .75$. The reliability coefficients of the three sub-dimensions identified in the factor analysis were as follows: $\alpha = .53$ for "perception of technical level"; $\alpha = .47$ for "stage anxiety perception"; $\alpha = .84$ for 'performance level perception'.

(iii) Kenny's Music Performance Anxiety Scale (KMPAI): The inventory was developed by Kenny in 2004 and revised and extended in 2009. Tokinan (2013) adapted the 5 point Likert type scale which has 25 items into Turkish. Although in the original scale there are 5 sub-dimensions when the inventory was translated into

Table 1. Personal information about the sample.

Personal Information		f	%
Gender	Female	81	62,8
	Male	48	37,2
Grade	1st year	31	24,0
	2nd year	34	26,4
	3rd year	32	24,8
	4th year	32	24,8
Type of High School	Fine Arts H.S.	106	82,2
	General H.S.	23	17,8

Turkish; it was seen that 3 of the sub-dimensions (Somatic Anxiety, Personal Monitoring, and Physiological Helplessness) has only one item, as it is not statistically correct to analyse only one item sub-dimensions. In this research although the researcher applied all the 25-items to the preservice music teachers only 2 sub-dimensions Negative Performance Perception (14 items) and Psychological Helplessness (8 items) KMPAI was analysed. To measure the reliability of the scale, Cronbach's Alpha coefficient was calculated. The total reliability coefficient of the scale was $\alpha = .68$. The reliability coefficients of negative performance perception $\alpha = .93$ and psychological helplessness $\alpha = .85$.

The data obtained through scales were analysed using SPSS 16.0 statistical package. First, descriptive statistics were calculated. In the statistical analyses, the frequency, valid and cumulative percentage distributions describing the general structure of the group were calculated in the direction of the answers given by the pre-service music teachers to the questions. In this study in order to determine the piano performance self-efficacy and music performance anxiety level according to the preservice music teacher perceptions arithmetic means were looked in and when interpreting the means the intervals were evaluated as follows: 1.00-1.79 'very low', 1.80-2.59 'low', 2.60-3.39 'middle', 3.40-4.19 'high' and 4.20-5.00 'very high'. These descriptive statistical procedures made with the aim of describing the sample group in terms of the variables under discussion were followed by the relational analysis studies carried out in accordance with the purposes and the variables of the study. Independent groups t-tests were used to test the significance of the difference between genders on the dependent variables. In the multiple comparisons, Anova was used for parametric distributions and the Mann Whitney U test was used for non-parametric distributions. To test if the conflict resolution method scores differed according to the variables, the independent groups t-test was used. Significances were checked bidirectionally at 0,05 level; in the results where the p value was smaller than 0,05, the differences between groups were accepted as "significant".

RESULTS

In this section of the study, the findings reached through the analysis of the data obtained from the pre-service music teachers via using the questionnaires and the interpretations about these findings were given.

The piano performance self-efficacy general scale score

means of the male pre-service music teachers were significantly higher than the female (Table 2). When the sub-dimension scores were taken into consideration, in stage anxiety perception, the male students' means were significantly higher than those of the female. In the sub-dimensions of technical level perception and performance level perception no statistically significant differences were observed between the female and the male pre-service music teachers. However, in the sub-dimensions of both the male pre-service music teachers had higher means compared to the female ones.

When the analysis was made on the basis of grade level, difference was in favor of the 3rd year students. At stage anxiety perception sub-dimension, no significant differences were determined. Moreover, in technical level perception the significant difference was in favour of 3rd year students who had the higher mean than the 1st year students. In the performance level perception sub-dimension, the significant difference was in favour of 2nd year students who had the higher mean than the 1st year students as well (Table 3).

According to the type of graduated high school there is not any significant difference between Fine Arts High School and general high school in terms of piano performance self-efficacy. However than the average of the general high school graduate pre-service music teachers' means seems to be higher. Statistically significant differences were determined in the technical level perception, stage anxiety and performance level perception sub-dimensions. In technical level perception, stage anxiety perception and performance level sub-dimensions the means of the Fine Arts High School graduate pre-service music teachers were higher than those of the general high school graduate pre-service music teachers (Table 4).

Although there is not any significant difference the music performance anxiety levels general scale score means of the female pre-service music teachers were higher than the means of the male pre-service music

Table 2. Piano performance self-efficacy levels according to gender.

		Gender	N	\bar{x}	sd	t	p
Scale	Piano performance self-efficacy	Female	81	2,61	0,42	2,26	,02
		Male	48	2,81	0,53		
Sub-dimensions	Technical level perception	Gender	N	\bar{x}	t	1,50	,13
		Female	81	2,80	3,30	,00	
	Stage Anxiety Perception	Female	81	2,57			
		Male	48	2,91			
	Performance Level Perception	Female	81	2,50	0,76	,44	
		Male	48	2,60			

Table 3. Piano performance self-efficacy levels according to grade level.

		Grade	N	\bar{x}	sd	p
Scale	Piano Performance Self-Efficacy	1st year (A)	31	2,7	0,40	.072
		2nd year (B)	34	2,65	0,50	
		3rd year (C)	32	2,71	0,56	
		4th year (D)	32	2,68	0,44	
		Grade	N	\bar{x}	F	p
Sub-dimensions	Technical Level Perception	1st year (A)	31	2.58	4.324	,007
		2nd year (B)	34	2.29		
		3rd year (C)	32	2.88		
		4th year (D)	32	2.73		
	Stage Anxiety Perception	1st year (A)	31	2.47	7.248	,554
		2nd year (B)	34	2.51		
		3rd year (C)	32	2.99		
		4th year (D)	32	2.86		
	Performance Level Perception	1st year (A)	31	2,66	6,177	,023
		2nd year (B)	34	3,02		
		3rd year (C)	32	2,86		
		4th year (D)	32	2,60		

teachers. When the sub-dimension scores were taken into consideration, in negative performance perception there is not any significant difference however female pre-service music teachers have higher means. In psychological helplessness sub-dimension the male pre-service music teachers' means were significantly higher than those of the female pre-service music teachers (Table 5).

When the grade level was taken into consideration, the

general scale score mean of 3rd year students is higher than that of other grades. In the negative performance perception sub-dimension, the scale score mean of the 3rd year students was significantly higher than that of the 1st year students. In the psychological helplessness sub-dimension, the scale score mean of the 4th and 2nd year students was significantly higher than those of the 1st year students (Table 6).

According to the type of graduated high school there is

Table 4. Piano performance self-efficacy levels according to the type of graduated high school.

			Type of High School	N	\bar{x}	sd	p
Scale	Piano Performance Self-Efficacy	Fine Arts H. S.	106	2,64	0,46	.085	
		General H. S.	23	2,88	0,51		
			Type of High School	N	\bar{x}	U	p
Sub-dimensions	Technical Perception	Level	Fine Arts H. S.	106	2,73	177,5	,044
			General H. S.	23	1,92		
Sub-dimensions	Stage Perception	Anxiety	Fine Arts H. S.	106	3,77	283,5	,003
			General H. S.	23	3,70		
Sub-dimensions	Performance Level		Fine Arts H. S.	106	2,89	238,5	,008
			General H. S.	23	2,76		

Table 5. Music performance anxiety levels according to gender.

			Gender	N	\bar{x}	sd	t	p
Scale	Music performance anxiety	Female	81	3,12	1,29	1,29	0,19	
		Male	48	2,82	1,30			
			N	\bar{x}		t	p	
Sub-dimensions	Negative performance perception	Female	81	3,19		1,66	0,09	
		Male	48	2,76				
Sub-dimensions	Psychological helplessness	Female	81	2,73		1,84	0,05	
		Male	48	2,94				

Table 6. Musical performance anxiety levels according to grade level.

			Grade	N	\bar{x}	sd	p
Scale	Music performance anxiety	1st year (A)	31	2,75	1,27		
		2nd year (B)	34	2,94	1,22	.042	
		3rd year (C)	32	3,38	1,19		
		4th year (D)	32	2,96	1,51		
			Grade	N	\bar{x}	F	p
Sub-dimensions	Negative performance perception	1st year (A)	31	2,21		5,225	,003
		2nd year (B)	34	2,16			
		3rd year (C)	32	2,96			
		4th year (D)	32	2,14			
Sub-dimensions	Psychological helplessness	1st year (A)	31	2,51		A-D	
		2nd year (B)	34	2,57			
		3rd year (C)	32	2,49			
		4th year (D)	32	2,65			

A-B

Table 7. Musical performance anxiety levels according to the type of high school.

Scale		Type of high school	N	\bar{x}	sd	p
Scale	Music Anxiety	Performance	Fine Arts H. S.	106	2,87	1,24
			General H. S.	23	3,44	1,39
Sub-dimension	Negative Perception	Performance	Fine Arts H.S.	106	2,44	2,325
			General H. S.	23	2,08	,000
	Psychological Helplessness		Fine Arts H.S.	106	2,50	2,191
			General H. S.	23	2,17	,009

Table 8. Correlation between the piano performance self-efficacy sub-dimensions and musical performance anxiety scale.

Dimensions	Technical level perception	Stage perception	Performance level perception	
Musical performance anxiety scale	r=0,07	r=-0,47	r=0,20*	Piano Performance Self-Efficacy r=-0,08*

Significance level according to *p<0,05.

not any significant difference between Fine Arts High School and general high school in terms of music performance anxiety. However than the average of the general high school graduate pre-service music teacher' means seems to be higher. In the sub-dimensions of negative performance perception and psychological helplessness, the significant difference is in favour of the Fine Arts High School graduates who had a higher means (Table 7).

In the correlation between the dimensions of both scales, a negative significant relationship was observed between the musical performance anxiety scale and the piano performance self-efficacy.

Moreover, it was also observed that there was a negative significant relationship between the musical performance anxiety scale and the stage perception and there was a positive significant relationship between the musical performance anxiety scale and the performance level perception (Table 8).

DISCUSSION

In relation to the pre-service music teachers' piano performance self-efficacy belief levels, the following interpretations can be made:

a) Interpretations due to piano performance self-efficacy levels according to gender:

In this study, the male pre-service music teachers' piano performance self-efficacy scale score mean was found significantly higher than that of the female pre-service music teachers. The obtained results were parallel to those obtained in the study made by Özmenteş and Özmenteş (2008) with the aim of investigating the relationships between the self-efficacy beliefs and personal characteristics related to the musical aptitude in instrument playing and also the ones obtained in the studies made by Zimmerman and Martinez-Pons (1990) and Nielsen (2004). However, the findings overlap those obtained in the study made by Çevik (2011), who found that the female pre-service music teachers perceived themselves as more competent than the male pre-service music teachers in the field of music education. According to the variable of gender, in some studies investigating the general self-efficacy levels, no significant differences were found between two genders (Akkoynlu et al., 2003; Işıksal et al., 2003; Yaman et al., 2004; Altunçekiç et al., 2005; Akbaş et al., 2006). In this study, the reason why the male pre-service music teachers' self-efficacy beliefs were higher than the female students might be the male students' taking the stage in the places of entertainment and having the chance to make music more frequently than the female students. Confidence in playing a musical instrument is in direct proportion to the time spent on the instrument. It can be concluded that this situation and also positive supportive feedback received from the audience are two factors increasing self-efficacy

beliefs.

b) Interpretations due to piano performance self-efficacy levels according to grade level:

When the analysis was made on the basis of grade level, difference was in favour of the 3rd year students. It can be stated that pre-service music teachers' self-confidence levels increase as their field knowledge increases with the advancing years. It was observed in the technical level perception sub-dimension of the piano performance self-efficacy beliefs of the pre-service music teachers that the 3rd year students had a higher technical level perception compared to the 1st year students. This result was foreseen because in 4th year piano course is elective course. Many students do not choose piano course. When the stage anxiety perception sub-dimension was taken into consideration, no significant differences were determined between the classes. This finding obtained in this study shows consistency with the finding obtained in the study where Gün (2014) emphasized the fact that the pre-service music teachers' stage anxiety perceptions did not differ according to their class levels.

c) Interpretations due to piano performance self-efficacy levels according to the type of graduated high school:

According to the type of graduated high school there is not any significant difference between Fine Arts High School and General High School in terms of piano performance self-efficacy. However the average of the general high school graduate pre-service music teachers' means seems to be higher. Statistically significant differences were determined in the technical level perception, stage anxiety and performance level perception sub-dimensions. In technical level perception, stage anxiety perception and performance level sub-dimensions the means of the Fine Arts High School graduate pre-service music teachers were higher than those of the general high school graduate pre-service music teachers. In the study made by Gün (2014), similar results were obtained. The Fine Arts High School graduate pre-service music teachers come to the Music Education Division with a music education accumulation of four years which they took in high school. Most general high school graduate students start piano education in the music education division. That the Fine Arts High School graduate pre-service music teachers' technical level perceptions and performance level perceptions were higher than those of the general high school graduates can be explained by this reason.

In relation to the pre-service music teachers' musical performance anxiety levels, the following interpretations can be made:

a) Interpretations due to musical performance anxiety

Levels according to gender:

Although there is not any significant difference the music performance anxiety levels, general scale score means of the female pre-service music teachers were higher than the means of the male pre-service music teachers. In the literature, there are some studies supporting this result (Abel et al., 1990; Rae et al., 2004; Yöndem, 2007; Studer et al., 2011; Çırakoğlu et al., 2013; Tokinan, 2014), there are others where no differences were found according to the variable of gender (Van Kemenade et al., 1995). Tokinan (2014) reported that in the clinical environment women were more frequently diagnosed as having psychological disorders than men. That the performance anxiety, which was defined by Kenny as a psychological disorder, is observed more frequently in women like in other psychological disorders supports the findings of this study. When the sub-dimension scores were taken into consideration, in negative performance perception there is not any significant difference however female pre-service music teachers have higher means. In Psychological helplessness sub-dimension the male pre-service music teachers' means were significantly higher than those of the female pre-service music teachers.

According to the results female students who have low self-efficacy in piano performance anxiety and high music performance anxiety strengthen the negative relationship between music performance anxiety and piano performance self-efficacy.

b) Interpretations due to musical performance anxiety levels according to grade levels:

When the grade level was taken into consideration, the general scale score mean of 3rd year students is higher than that of other grades. In the negative performance perception sub-dimension, the scale score mean of the 3rd year students was significantly higher than that of the 1st year students. In the psychological helplessness sub-dimension, the scale score mean of the 4th and 2nd year students was significantly higher than those of the 1st year students. Starting from the 1st year until the 4th year, the music pieces included in the piano course program are arranged from easy to difficult. It is considered that this might have resulted from the music pieces with increasing difficulty level. However, this overlaps the finding obtained by Hamann (1982) that experienced students taking education for longer period of time exhibited better performance in front of the audience in anxiety environment compared to less experienced students.

c) Interpretations due to musical performance anxiety levels according to the type of high school:

According to the type of graduated high school there is

not any significant difference between Fine Arts High School and general high school in terms of music performance anxiety. In a study, Tokinan (2014) also found that musical performance anxiety did not differ significantly according to the type of graduated high school. However in our study the average of the general high school graduate pre-service music teacher' means seems to be higher. Because most of the general high school graduated pre-service music teacher start to play the piano in the music education division their levels are not as high as Fine Arts High School graduates. Performance anxiety of general high school graduates can be explained with this.

In relation to Correlation between the Piano Performance Self-Efficacy Sub-Dimensions and Musical Performance Anxiety Scale the following interpretations can be made:

There was a significant negative relationship between the students' musical performance anxiety levels analysed in accordance with the data obtained from the scale answered by the students by considering their "piano performance self-efficacy beliefs and piano performances". That's to say, as the students' piano performance self-efficacy beliefs decreased, their musical performance anxiety levels increased. In some studies, similar results were reached. In their study, McCormick and McPherson (2003) found a strong relationship between the self-efficacy belief and the musical performance quality. Moreover, Topoğlu (2014) determined a small significant negative correlation between the pre-service music teachers' state anxiety levels and their self-efficacy beliefs related to their musical abilities as well. Furthermore, Mcquade (2008) reported that there was a significant negative relationship between self-efficacy and performance anxiety and as self-efficacy decreased, performance anxiety increased.

RECOMMENDATIONS

Based on the results of this study, it can be stated that there is a need for studies to investigate possible reasons for low piano performance self-efficacy belief levels in all students, particularly female students. After investigating possible reasons, necessary precautions should be taken to increase piano performance self-efficacy belief levels of the students that have low piano performance self-efficacy, particularly female students. For this reason, it is suggested that piano instructors should rearrange conditions of working with students having low self-efficacy belief levels. Such matters as selection of music pieces, time allocated for practicing, working environments, points to consider in playing musical pieces, etc. should be discussed by higher education board and the necessary changes in the curriculum should be done.

The strongest factor affecting students' self-efficacy beliefs is performance achievements (Arslan, 2012). Positive experiences lived by individuals help increase their self-efficacy beliefs (Özkal, 2013). Levels of music pieces to be played by students can be reviewed within this context and they can be made to taste the feeling of success with music pieces which students can overcome. It is believed that as a student's sense of success increases, his/her self-efficacy belief increase, too (Arslan, 2012).

According to Arslan (2012), indirect experiences, too, are an important source of self-efficacy belief. In indirect experiences provided by social models, individuals are affected by what they observe and their beliefs related to what they have increase (Özkal, 2013). Starting from this, students can be provided with an environment in which students playing music pieces with similar difficulty levels can have an opportunity to watch one another and then successful student behaviours can be shown as examples to students with low self-efficacy belief levels. Hence, it is considered that the piano performance self-efficacy belief level of a student seeing his/her friend play a musical piece successfully might increase. Moreover, their performances can be recorded step by step and their developments can be shared with other students. Hence, it is believed that the self-efficacy belief level of a student witnessing another student's development process can increase.

If individuals are convinced verbally that they have necessary abilities to complete given activities, they exhibit more effort and perseverance when there is a problem that those who feel personal incompetence and self-suspicion (Özkal, 2013). It is also believed that verbally persuading students that they can do their performances most successfully can increase their piano performance self-efficacy beliefs. When students take supportive feedback from their families, teachers and peers, their confidence levels increase.

Self-efficacy is an important feature related to the affective domain. According to Bandura (1995), individuals' psychological states at the same time affect their judgments in relation to their personal competencies. Positive psychological state increases perceived self-efficacy, but hopeless psychological state decreases self-efficacy (Cited by Özkal, 2013). For this reason, it is necessary that piano educators should follow developments about their students carefully.

With this study, it was observed that as the students' piano performance self-efficacy beliefs increased, their musical performance anxiety levels decreased due to various reasons. It is believed that students' music performance anxiety levels can be minimized via taking the stage frequently.

In this context, it is suggested that activities should be organized to have piano students frequently live this experience and not only those who have high technical

skills but also those who are at every level should be encouraged. This will allow students for creating regular studying discipline.

Musical performance anxiety is a frequently encountered problem among musicians. For this reason, it is suggested that the Music Education Divisions should include methods of coping with musical performance anxiety within the scope of elective courses or among the subject matters of the current courses in their teaching programs and also courses or subject matters to increase students' awareness levels in relation to self-efficacy beliefs.

Conflict of Interests

The author has not declared any conflicts of interest.

REFERENCES

Abel L, Larkin KT (1990). Anticipation of Performance among Musicians: Physiological Arousal, Confidence, and State-Anxiety. *Psychol. Music.* 18 (2):171-182. doi: 10.1177/0305735690182006

Akbaş A, Çelikkaleli Ö (2006). Grade Öğretmeni Adaylarının Fen Öğretimi Öz Yeterlik İnançlarının Cinsiyet, Öğrenim Türü ve Üniversitelerine Göre İncelenmesi. Mersin Üniversitesi Eğitim Fakültesi Dergisi, Cilt 2, Sayı 1:98-110.

Akkoynunlu B, Orhan F (2003). Bilgisayar ve Öğretim Teknolojileri Eğitimi (BÖTE) Bölümü Öğrencilerinin Bilgisayar Kullanma Öz Yeterlik İnanç ile Demografik Özellikler Arasındaki İlişki. *The Turkish Online Journal of Educational Technology, TOJET.* ISSN: 1303-6521 2(3):86-93.

Altunçekic A, Yaman S, Koray Ö (2005). Öğretmen Adaylarının Öz Yeterlik İnanç Düzeyleri ve Problem Çözme Becerileri Üzerine Bir Araştırma (Kastamonu İli Örneği), Kastamonu Eğitim Dergisi, 13(1):93-102.

Arslan A (2012). İlköğretim Öğrencilerinin Öz Yeterlik İnanç Kaynaklarının Öğrenme ve Performansla İlgili Öz Yeterlik İnançını Yordama Gücü. *Kuram ve Uygulamada Eğitim Bilimleri. Educ. Sci. Theory Pract.* 12(3):1907-1920.

Bandura A (1986). Social foundation of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.

Bandura A (1995). Self-efficacy in changing societies. Cambridge: Cambridge University Press.

Chan MY (2011). The Relationship between Music Performance Anxiety, Age, Self-Esteem, and Performance Outcomes in Hong Kong Music Students. Ph. D. Thesis, Unpublished, Durham University.

Çevik DB (2011). Grade Öğretmeni Adaylarının Müzik Öğretimi Öz Yeterlik Düzeylerinin İncelenmesi. Ahi Evran Üniversitesi Eğitim Fakültesi Dergisi, Cilt 12, Sayı 1:145-168.

Çırakoğlu OC (2013). Sahnede Düşman: Müzisyenlerde Performans Kaygısı Üzerine Bir Gözden Geçirme. Başkent Üniversitesi Türk Psikoloji Yazılıları 16(32):95-104.

Gün E (2014). Piyano Performansı Öz Yeterlik Ölçeğinin Geliştirilmesi ve Uygulanması. Ph. D. Thesis, Unpublished. Burdur: University of Mehmet Akif Ersoy.

Gün E, Yıldız G (2014). Müzik Öğretmen Adaylarına Yönelik Piyano Performansı Öz yeterlik Ölçeğinin Geliştirilmesi. *Turkish Studies - International Periodical for the Languages, Literature and History of Turkish or Turkic* 9/5:1053-1065.

Hamann DL (1982). An assessment of anxiety in instrumental and vocal performances. *J. Res. Music Educ.* 30(2):77-90. doi: 10.2307/3345040

İşiksal M, Aşkar P (2003). İlköğretim Öğrencileri İçin Matematik ve Bilgisayar Öz-yeterlik Algısı Ölçekleri. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 25:109-118

Jinks J, Lorsbach A (2003). Introduction: Motivation and Self-Efficacy Belief. *Read. Writing Q.* 19:113-18. DOI:10.1080/10573560308218

Kenny DT, Osborne MS (2006). Music performance anxiety: New insights from young musicians. *Adv. Cognit. Psychol.* 2(2-3):103-112.

Kenny DT (2009). Negative emotions in music making: Performance anxiety. In Juslin, P. & Sloboda, J. (Eds). *Handbook of Music and Emotion: Theory, Research, Applications*, pp. 425-451. Oxford, UK: Oxford University Press.

Kenny DT (2011). *The Psychology of Music Performance Anxiety.* Oxford: Oxford University Press.

Kenny DT, Driscoll T, Ackermann B (2014). Psychological well-being in professional orchestral musicians in Australia: A descriptive population study. *Psychol. Music* 42(2):210-232.

Kotaman H (2008). Özyeterilik İnanç ve Öğrenme Performansının Geliştirilmesine İlişkin Yazın Taraması. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi* 21(1):111-133

Locke EA, Latham GP (1990). A theory of goal setting & task performance. Englewood Cliffs, NJ: Prentice Hall.

Mcquade CM (2008). An Investigation of the Relationships among Performance Anxiety, Perfectionism, Optimism, and Self-Efficacy in Student Performers. Ph. D. Thesis, Unpublished. New York: Fordham University.

McCormick J, McPherson GE (2003). The Role of Self-Efficacy in a Musical Performance Examination: An Exploratory Structural Equation Anal. *Psychol. Music* 31(1):37-51. doi: 10.1177/0305735603031001322

McPherson G., McCormick, J. (2006). Self-efficacy and music performance. *Psychol. Music.* 34:322-336. doi: 10.1177/0305735606064841

Nielsen SG (2004). Strategies and self-efficacy beliefs in instrumental and vocal individual practice: a study of students in higher music education. *Psychol. Music.* 32(4):418-431. doi: 10.1177/0305735604046099

Özkal N (2013). Sosyal Bilgiler Dersine Yönelik Olumlu Tutumların Özyeterlik İnançlarına Göre Yordanması. Mersin Üniversitesi Eğitim Fakültesi Dergisi, Cilt 9, Sayı 2:399-408.

Özmenteş G, Özmenteş S (2008). Çalğı eğitiminde müzik yeteneğine ilişkin özyeterlik ve kişisel özellikler arasındaki ilişkiler. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi* 2(24):92-100.

Rae G, McCambridge K (2004). Correlates of performance anxiety in practical music exams. *Psychol. Music.* 32(4):432-439. doi: 10.1177/0305735604046100

Senemoğlu N (1998). *Gelişim Öğrenme ve Öğretim. Kuramdan Uygulamaya.* Ankara: Özsen matbaası

Studer R, Danuser B, Hildebrant H, Arial M, Gomez P (2011). Hyperventilation complaints in musical performance anxiety among classical music students. *J. Psychomatic Res.* 70:557-564. doi:10.1016/j.jpsychores.2010.11.004

Tokinan ÖB (2013). Kenny Müzik Performans Kaygısı Envanterini Türkçe'ye Uyarlama Çalışması. Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi (KEFAD) Cilt 14(1):53-65.

Tokinan ÖB (2014). Öğretmen Adaylarının Müzik Performans Kaygılarının Bireysel Özellikler Bakımından İncelenmesi. *NWSA-Fine Arts,* D0150, 9(2):84-100. <http://dx.doi.org/10.12739/NWSA.2014.9.2.D0150>

Topoğlu O (2014). Musical Performance Anxiety: Relations between Personal Features and State Anxiety Levels of Pre-Service Music Teachers. *Int. Online J. Educ. Sci.* 6(2):337-348. doi: <http://dx.doi.org/10.15345/ijoes.2014.02.008>

Van Kemenade JFLM, Van Son MJM, Van Heesch NCA (1995) Performance Anxiety Among Professional Musicians In Symphonic Orchestras: A Self-Report Study. *Psychol. Rep.* 77(2):555-562. doi: 10.2466/pr.0.1995.77.2.555

Yaman S, Cansüngü Ö, Altunçekic A (2004). Fen bilgisi öğretmen adaylarının öz-yeterlik inanç düzeylerini incelenmesi üzerine bir araştırma. *Türk Eğitim Bilimleri Dergisi*, 2(3): 355-364.

Yöndem ZD (2007). Performance Anxiety, Dysfunctional Attitudes and Gender in University Music Students. *Social Behavior and Personality: an Int. J.* 35(10):1415-1426. DOI: <http://dx.doi.org/10.2224/sbp.2007.35.10.1415>

Yükseköğretim Kurulu [YÖK] (1998). Eğitim Fakültesi Öğretmen Yetiştirme Lisans Programları. Ankara: YÖK Yayınları. 80 (https://www.yok.gov.tr/documents/10279/30217/Egitim_fakultesi_ogretmen_yetistirme_lisans_programlari_mart_98.pdf/5e166018-b806-48d5-ae13-6af5dac511c)

Zimmerman BJ, Martinez-Pons M (1990). Student Differences in Self-Regulated Learning: Relating Grade, Sex, and Giftedness to Self-Efficacy and Strategy Use, *J. Educ. Psychol.* 82(1):51–9. <http://dx.doi.org/10.1037/0022-0663.82.1.51>